

REMARKS

I. Introduction

Claims 1-5, 7-13, 15-17 and 19-30 are pending in the application.

An interview with the Examiner and applicants' representatives was conducted on November 10, 2004 to discuss the merits of the case. Applicants wish to thank the Examiner for the courtesy extended during the interview.

Applicants have amended claim 1 in response to the Examiner's Objection.

Applicants have incorporated the Examiner's suggestion with respect to the Objection to claim 23.

Applicants have amended the drawings and specification to include the terms "first manager component" and "second manager component" as suggested by the Examiner to overcome the objection to claims 4 and 7-12.

Applicants have replaced the word "adaptable" with "configurable" to address the Examiners concerns about the word "adaptable."

Claims 1-5, 7-13, 15-17 and 19-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,005,122 to Griffin *et al.* ("Griffin") in view of U.S. Patent No. 5,276,867 to Kenley *et al.* ("Kenley"). Claims 4-30 are further rejected under 35 U.S.C. § 103(a) as being unpatentable over Griffin and Kenley in view of U.S. Patent No. 4,995,035 to Cole *et al.* ("Cole"). Reconsideration of this case in light of the amendments above the remarks below is respectfully requested.

II. Applicants Reply To The Rejections Under 35 U.S.C. § 103(a)

Claims 1-5, 7-13, 15-17 and 19-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,005,122 to Griffin *et al.* (“Griffin”) in view of U.S. Patent No. 5,276,867 to Kenley *et al.* (“Kenley”). Claims 4-30 are further rejected under 35 U.S.C. § 103(a) as being unpatentable over Griffin and Kenley in view of U.S. Patent No. 4,995,035 to Cole *et al.* (“Cole”). Applicants respectfully traverse this rejection.

Previously, applicants have argued that one reason the claimed invention is patentable over the Examiner’s proposed combination of Griffin and Kenley is because a management component associated with one backup cell can control other different backup cells (and vice versa). One benefit of this arrangement is that backup cells may communicate with and be controlled by more than one management component so if one management component fails (*e.g.*, during a failover condition), another may perform the required management functions so storage operations may continue to be performed. This is a substantial improvement over the static master-slave architecture described by Griffin in which a master management server controls operations performed by a slave server. In Griffin, the slave management server is incapable of controlling the master management server (Griffin, Col. 7, lines 19-31).

Consequently, in Griffin, if the slave management server fails, the master management server is unable to control the backup devices controlled by the slave management server. Thus, a failure in the slave manager will cause any backup operation to also fail because of the inability of the master manager to perform the tasks carried out by the slave manager. Thus, the system of Griffin is susceptible to a significant backup

failure if a single component such as a management server or a slave server becomes inoperable. Griffin fails to provide any solution for such a problem or even recognize that this vulnerability exists.

In contrast, however, the first backup cell as specified in applicants' claim 1 may be controlled by a first management component included in the first backup cell which may be configured to be controlled by a second management component in another of the plurality of backup cells. Thus, unlike Griffin, if the first management component in the first backup cell is unavailable, a backup operation may still be accomplished using the second management component. This provides robust failover and routing options which allows applicants' claimed invention to continue substantially normal operation even if a certain management component fails. This arrangement also provides significant scalability and integration advantages.

In sustaining this rejection, the Examiner states "Applicants' argue: Griffin does not contain any teaching or suggestion of each of a plurality of management servers being able to control the other has been considered but is not persuasive. Response: In response to Applicants' argument that the references fail to show or suggest certain features of applicant's invention, it is noted that the features upon which applicant relies (*i.e.*, "a plurality of management servers being able to control the other") are not recited in the rejected claim(s)." *See* Office Action, page 11. Applicants believe that no rejection of this particular feature was included in the Office Action.

However, despite the Examiner's assertion in the foregoing, applicants respectfully point out that the feature of a backup cell being configured to be controlled by management components in other different backup cells is clearly recited in the

claims. For example, claim 1, as amended, specifies a management component, communicatively coupled to the at least one backup device, controlling the backup of the data to the backup device; and each of the plurality of backup cells communicatively coupled to at least one other backup cell among the plurality of backup cells, and each of the plurality of backup cells configurable to be controlled by a management component in another backup cell among the plurality of backup cells.

Thus, because claim 1 expressly specifies that each of the plurality of backup cells are configurable to be controlled by management components of other backup cells, the patentable distinction provided in the argument set forth above is indeed present in the claim. Accordingly, applicants respectfully submit that claim 1 and the claims that depend therefrom are allowable over the prior art.

Moreover, applicants point out that this distinction is also present in the other pending independent claims. For example, claims 4 and 10 specify separate first and second management components that are capable of controlling the same backup device. Claim 16 specifies first and second network devices capable of controlling the same backup devices. Likewise, claim 20 specifies a first backup cell capable of being controlled by a management component present in another backup cell. Claims 23 and 27, as amended, include similar distinctions. Accordingly, applicants respectfully submit that independent claims 4, 10, 16, 20, 23 and 27 and the claims that depend therefrom are also allowable over the prior art.

In addition to the above, applicants respectfully submit that there is no suggestion to combine Kenley with Griffin as proposed by the Examiner. For example, Kenley employs a Mount Queue Manager (“MQM”) that is solely directed to mounting

requested volumes, scheduling usage of the removable media, volume allocation, de-allocation, and access control (Col. 5, lines 36-39 and lines 57-63). The MQM unit described in Kenley is a component of limited functionality that is directed to facilitating physical aspects of backups on storage media. The MQM does not control the backup of data to the backup device and is therefore merely a support component. Thus, even if Kenley and Griffin were to be combined as proposed by the Examiner, the resulting combination still would not produce applicants' claimed invention. Furthermore, there is no teaching or suggestion that the MQM is part of a backup cell. Thus, Griffin and Kenley relate to different aspects of backup technology and neither reference contains a suggestion or motivation to combine with the other.

Moreover, there is also no suggestion to combine Cole with Griffin. Cole discusses cross-domain zones of control in a network using focal point nodes (Col. 1, lines 55-68). Cole is directed to segmenting network topologies and not to hierarchically organizing a storage network. Nowhere does Cole discuss storage-related operations such as backup operations using backup cells. There is thus no suggestion or motivation to combine Cole with the backup technologies discussed in Griffin and Kenley.

Thus, the prior art does not disclose or suggest, as set forth in applicants' claim 1, a backup and retrieval system for a network computing system, the network computing system comprising: a plurality of groups of network devices storing data, the backup and retrieval system comprising a plurality of backup cells each comprising: a backup device executing a backup of the data stored on at least one of the plurality of groups of network devices; a management component, communicatively coupled to the at least one backup device, controlling the backup of the data to the backup device; and each

of the plurality of backup cells communicatively coupled to at least one other backup cell among the plurality of backup cells, and each of the plurality of backup cells configurable to be controlled by a management component in another backup cell among the plurality of backup cells.

Moreover, Griffin does not contain any suggestion or teaching of a first management server directly controlling a backup device controlled by a second management server. Instead, in Griffin, a master management server control backup devices by passing commands through and using a slave management server. Thus, if the slave management server fails, the master may be unable to control its backup devices. This also limits the scalability of the system.

Thus, the prior art does not disclose or suggest, as set forth in applicants' claims 4, and 10, a backup and retrieval system for a network computing system including a second manager component, in addition to a first manager component, directly controlling the backup of the data to the at least one backup device. In addition in claim 4, the first manager component and the second manager component are part of backup cells. For at least the above reasons, claims 4, and 10 are patentable over the prior art.

Similarly, the prior art does not disclose or suggest, as set forth in applicants' claim 20, a backup and retrieval system for a network computing system comprising: a plurality of backup cells comprising a backup device executing a backup of data stored on at least one of a plurality of network devices, a management component for controlling the backup of the data to the backup device, whereby the first backup cell is

capable of being controlled by a management component in the other backup cell. For at least the above reasons, claim 20 is patentable over the cited art.

III. Conclusion

Accordingly, for at least all of the above reasons, applicants respectfully request that the Examiner withdraw all rejections and allow the pending claims. To expedite prosecution of this application to allowance, the examiner is invited to call the applicants' undersigned representative to discuss any issues relating to this application.

Respectfully submitted,



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I hereby certify that the correspondence attached herewith is being transmitted via First Class Mail to the Commissioner for Patents, Alexandria, VA 22313

Diane M. Torniul 6-14-05
Diane M. Torniul Date

IN THE DRAWINGS

The attached sheets of drawings includes changes in Figs. 1-3. These sheets, replace the original Figs. 1-3.

Attachment: Replacement Sheets

Annotated Sheets Showing Changes

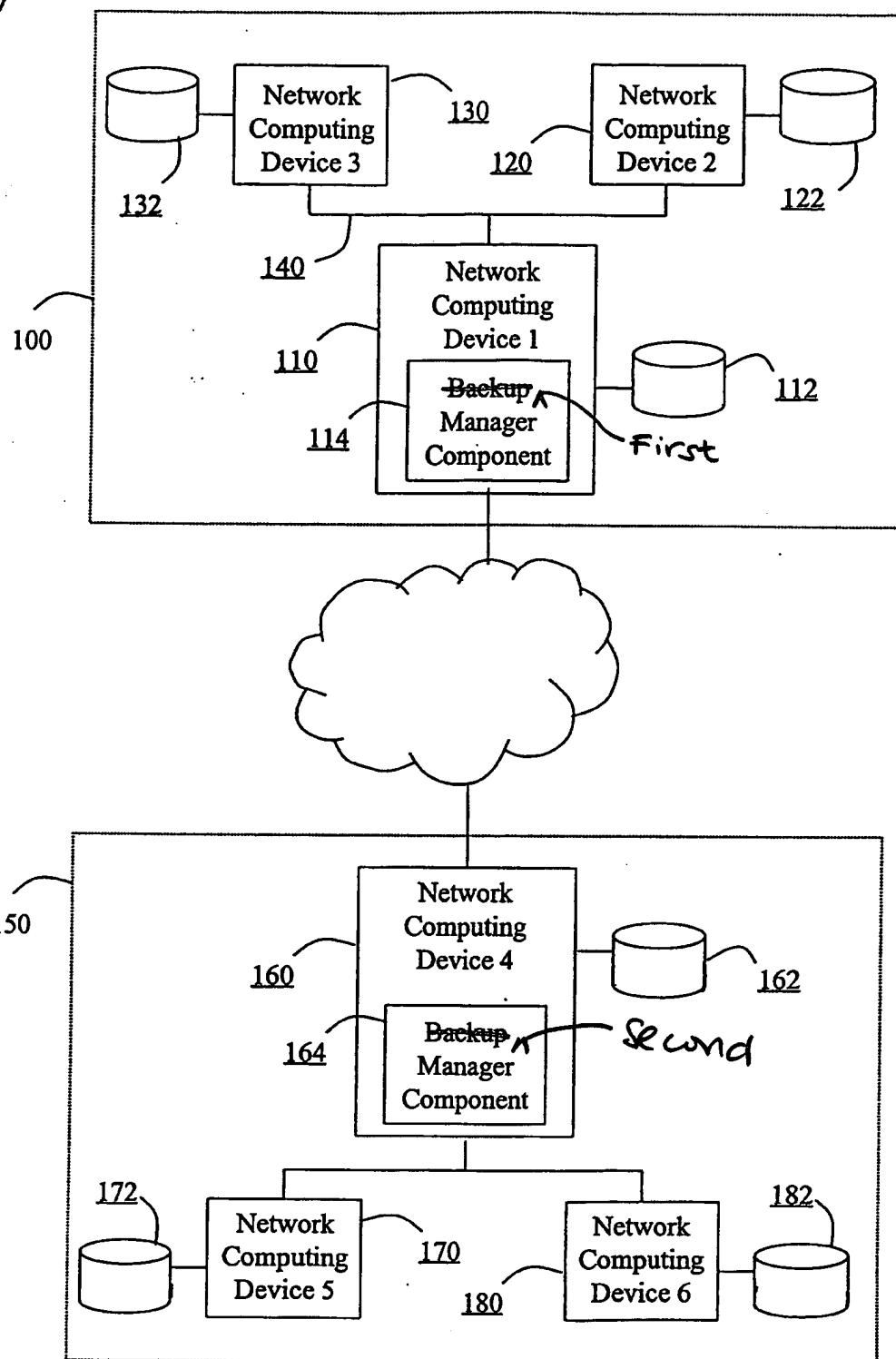


FIG. 1

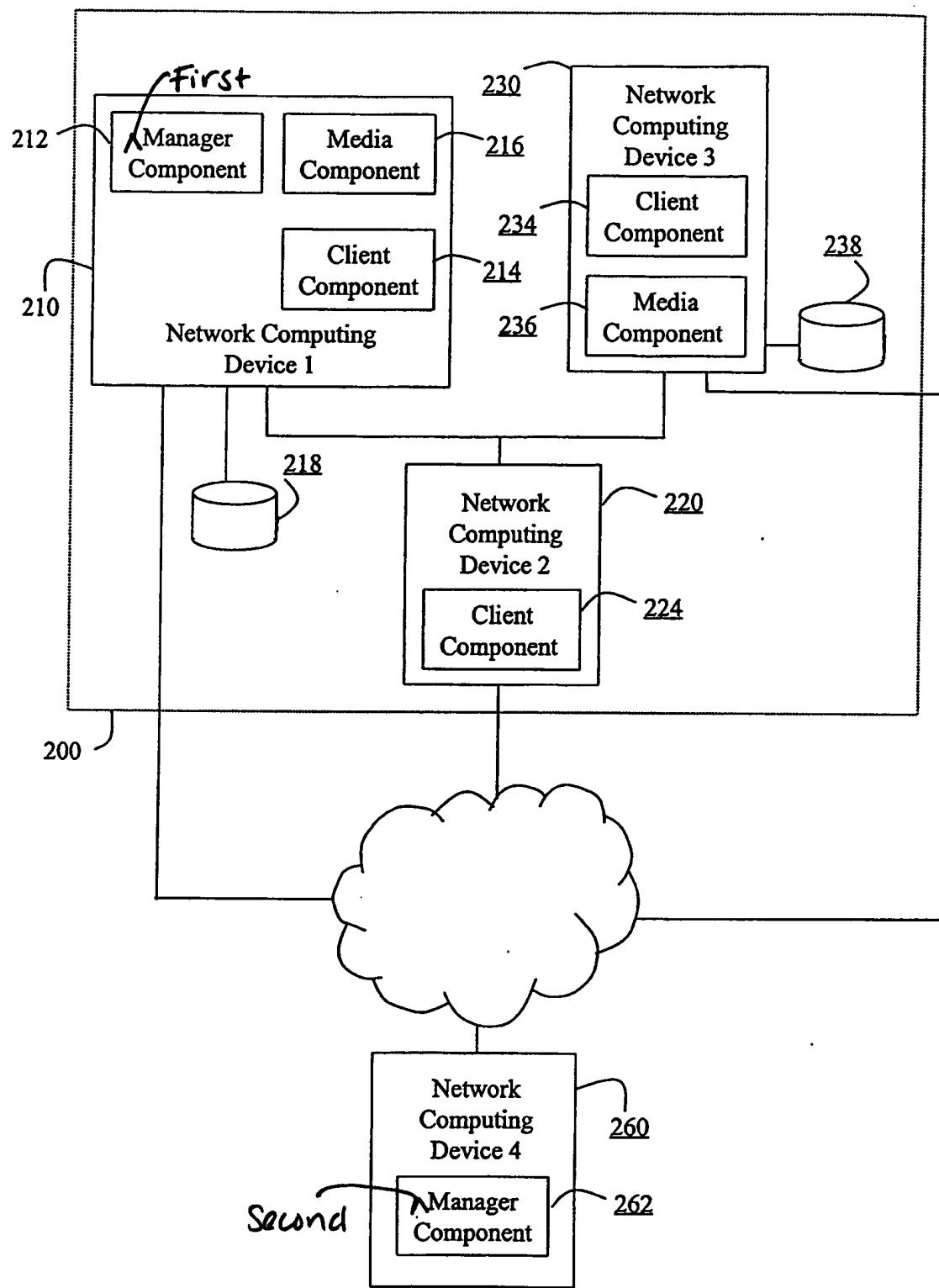


FIG. 2

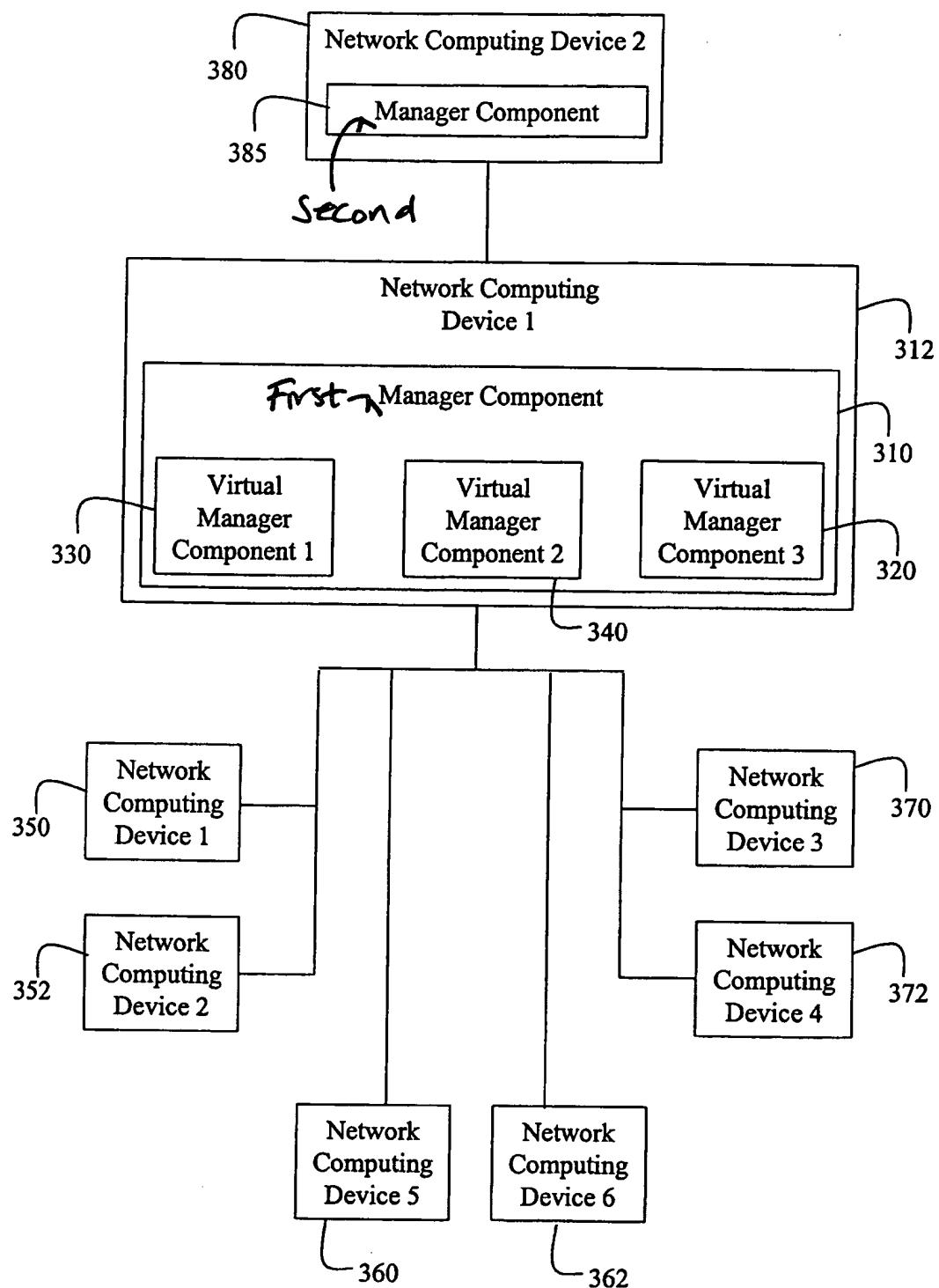


FIG. 3